

a first plurality of elongated electrical conductors each having a protuberance at one end thereof;

said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;

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said array of elongated conductors being embedded in a material;

said elongated conductors having exposed probe tip ends at an exposed surface of said material;
and

[An electronic device probe according to claim 1, wherein] said first space transformer has a second surface with a second plurality of contact locations thereon and said second space transformer has a surface with a plurality of third contact locations.

912 (Amended) An electronic device probe for probing an electronic device comprising:

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a first space transformer having a first surface;

said first surface having a first plurality of contact locations;

a first plurality of elongated electrical conductors each having a protuberance at one end thereof;

said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;

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said array of elongated conductors being embedded in a material;

said elongated conductors having exposed probe tip ends at an exposed surface of said material;
and

① an electronic probe according to claim 1, further including a means for disposing said probe tip ends in electrical contact with contact locations on said electronic device.

10. 13. (Amended) An electronic device probe for probing an electronic device comprising:

a first space transformer having a first surface;

said first surface having a first plurality of contact locations;

a first plurality of elongated electrical conductors each having a protuberance at one end thereof;

said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;

an elastomeric

① said array of elongated conductors being embedded in a material;

said elongated conductors having exposed probe tip ends at an exposed surface of said material;
and

[An electronic device probe according to claim 1, wherein] said elastomeric material has a depression surrounding at least one of said probe tip ends.

14. (Amended) An electronic device probe for probing an electronic device comprising:

a first space transformer having a first surface;

said first surface having a first plurality of contact locations;

a first plurality of elongated electrical conductors each having a protuberance at one end thereof;

said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;

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said array of elongated conductors being embedded in a material;

an elastomeric

said elongated conductors having exposed probe tip ends at an exposed surface of said material;
and

[An electronic device probe according to claim 1, wherein] said probe tip ends extend beyond said exposed surface of said elastomeric material.

15. (Amended) An electronic device probe for probing an electronic device comprising:

a first space transformer having a first surface;

said first surface having a first plurality of contact locations;

a first plurality of elongated electrical conductors each having a protuberance at one end thereof;

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said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;

said array of elongated conductors being embedded in a material;

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said elongated conductors having exposed probe tip ends at an exposed surface of said material;
and

[An electronic device probe according to claim 1, wherein] said probe is part of an electronic device test tool.

1317. (Amended) An electronic device probe for probing an electronic device comprising:

a first space transformer having a first surface;

said first surface having a first plurality of contact locations;

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a first plurality of elongated electrical conductors each having a protuberance at one end thereof;
said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;

said array of elongated conductors being embedded in a material;

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said elongated conductors having exposed probe tip ends at an exposed surface of said material;
and

[An electronic device probe according to claim 1, wherein] said electronic device is selected from the group consisting of a semiconductor chip and a semiconductor chip packaging substrate and a semiconductor wafer.

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18. (Amended) An electronic device probe for probing an electronic device comprising:

a first space transformer having a first surface;

said first surface having a first plurality of contact locations;

a first plurality of elongated electrical conductors each having a protuberance at one end thereof;

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said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;

said array of elongated conductors being embedded in a material;

said elongated conductors having exposed probe tip ends at an exposed surface of said material;
and

[An electronic device probe according to claim 1, wherein] said protuberance is selected from the group consisting of a wire bond ball bond, a solder bump bond and a laser weld bond.

15. (Amended) An electronic device probe for probing an electronic device comprising:

a first space transformer having a surface;

said surface having a first plurality of contact locations;

a plurality of elongated electrical conductors each having a protuberance at one end thereof;

said each of said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;

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said array of elongated conductors being embedded in an elastomeric material

said elongated conductors being embedded in an elastomeric material'

a second space transformer in electrical connection with said first space transformer;

said first space transformer has a second surface with a second plurality of contact locations thereon and said second space transformer has a surface with a plurality of third contact locations;

an electrical interconnection means for electrically interconnecting said second plurality of electrical contact locations to said third plurality of electrical contact locations;

a holding means for holding said first space transformer in a fixed spatial relationship with respect to said second space transformer;

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a means for disposing said probe tip ends in electrical contact with contact location on said electronic device; and

[An electronic device probe according to claim 20, wherein] said elastomeric material has a depression surrounding at least one of said probe tip ends.

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23. (Amended) An electronic device probe for probing an electronic device comprising:

a first space transformer having a surface;

said surface having a first plurality of contact locations;

a plurality of elongated electrical conductors each having a protuberance at one end thereof;

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said each of said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;
ending in probe tip ends

said array of elongated conductors being embedded in an elastomeric material

said elongated conductors being embedded in an elastomeric material'

a second space transformer in electrical connection with said first space transformer;

said first space transformer has a second surface with a second plurality of contact locations thereon and said second space transformer has a surface with a plurality of third contact thereon;

an electrical interconnection means for electrically interconnecting said second plurality of electrical contact locations to said third plurality of electrical contact locations;

a holding means for holding said first space transformer in a fixed spatial relationship with respect to said second space transformer;

a means for disposing said probe tip ends in electrical contact with contact location on said electronic device; and

[An electronic device probe according to claim 20, wherein] said electrical interconnection means is an interposer between said first space transformer and said second space transformer.

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24. (Amended) An electronic device probe for probing an electronic device comprising:

a first space transformer having a first surface;

said first surface having a first plurality of contact locations;

a first plurality of elongated electrical conductors each having a protuberance at one end thereof;

said protuberance of each of said plurality of elongated conductors is bonded to one of said plurality of contact locations;

each of said plurality of elongated conductors extends outwardly away from said surface to form an array of elongated conductors;

said array of elongated conductors being embedded in a material;

said elongated conductors having exposed probe tip ends at an exposed surface of said material;
and

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